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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,380	09/19/2003	Tzvi Avnery	2251.2001-009	8508

21005 7590 04/10/2007  
HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
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CONCORD, MA 01742-9133

EXAMINER
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MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/666,380	Applicant(s) AVNERY, TZVI	
	Examiner Kishor Mayekar	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/06</u> ( <u>12/06</u> ).                                   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

1. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102 and § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 8-10, 12, 14, 15, 17, 20-22, 24, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Patrick et al. (US 4,396,580) in light of Potapenko (US 3,105,733). Patrick's invention is directed to processes and apparatus for treatment of process flows by beams of ionizing radiant energy or using high voltage electron beams

where the typical applications for such processes and apparatus include the sterilization of air described in U.S. Patent No. 3,105,733 (col. 1, lines 7-13). Patrick discloses in Figs. 4 and 5 that a method comprises all the steps as claimed in the above claims. Potapenko's sterilization includes a duct that may be apart of any air transmission apparatus known to the art (col. 3, lines 51-75).

5. Claims 3, 11, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patrick '580 in light of Potapenko '733 in view of Lee et al. (US 6,210,642 B1) and Detzer (US 5,368,816), both references cited in the last Office action. The difference between the reference as applied above and the instant claims is the provision of a converter. Lee shows in an apparatus for irradiating a gas with electron beams that the apparatus can be used as a sterilizer because of the generating of ozone from oxygen by the apparatus and its application in air cleaners in leaving spaces and central heating/cooling facilities (col. 12, lines 21-37). Detzer shows in air cleaner the recited converter (Fig. 1 and col. 3, lines 61-65). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as shown by Lee and Detzer because Lee shows that the electron beam will generate ozone from oxygen and Detzer shows the provision of the converter to strip out the ozone before the air stream is reintroduced into a living space as ozone is itself a highly toxic substance when it exceeds a threshold level in air.

6. Claims 5, 13, 18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patrick '580 in light of Potapenko '733 in view of Jones (US 5,925,320), a reference cited in the last Office action. The difference between the reference as applied above and the instant is the provision of the recited reflector. Jones shows in air purification the provision of a reflector opposite to a radiation beam (Fig. 1 and col. 3, lines 57-62). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by Jones because the provision of a reflector to reflect the radiation would increase the efficiency of the system in eliminating harmful pollutants in recirculated indoor air. Further, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

7. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patrick '580 in light of Potapenko '733 in view of a prior art disclosed in Aoki et al. (US 4,961,830). The difference between the references as applied above and the instant claims is the provision of the recited shielding. A prior art to an e-beam system disclosed in Fig. 2 of Aoki shows the limitation. The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have

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modified the reference' teachings as shown in Fig. 2 of the prior art in Aoki because selection of known material based on its suitability for the intended use has been held to be obvious, *In re Leshin* 125 USPQ 416.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patrick '580 in light of Potapenko '733 in view of a prior art disclosed in Aoki '830 as applied to claims 6 and 19 above, and further in view of Goswami (US 5,933,702). The difference between the references as applied above and the instant claims is the provision of the collimating of the duct. Goswami shows the above limitation after treating the air cleaning (Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference' teachings as shown By Goswami because this would result in directing the treated air to appropriate areas. Further, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

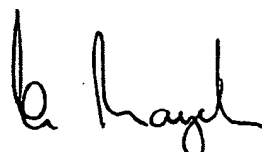
***Response to Arguments***

9. Applicant's arguments filed 26 June 2006 have been fully considered but they are not persuasive because of new grounds of rejections as set forth in the above paragraphs.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kishor Mayekar  
Primary Examiner  
Art Unit 1753